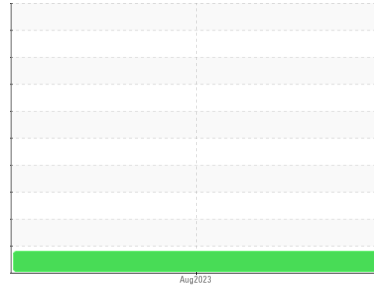# PROBLEM SUMMARY

Sample Rating Trend

Aug2023

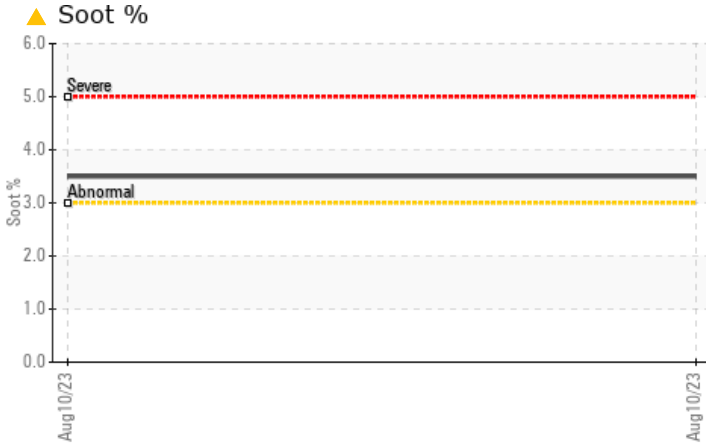## SOOT

Machine Id
FREIGHTLINER 88
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (13 LTR)

COMPONENT CONDITION SUMMARY

⚠ Soot %

RECOMMENDATION

We advise that you check for faulty combustion, plugged air filters, or aftercoolers. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	---	---
Soot %	%	*ASTM D7844	>3	⚠ 3.5	---	---

Customer Id: ATRPIN
Sample No.: PCA0102640
Lab Number: 05924126
Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:
Don Baldridge +1
don.b505@comcast.net

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid	---	---	?	Oil and filter change at the time of sampling has been noted.
Change Filter	---	---	?	Oil and filter change at the time of sampling has been noted.
Check Combustion	---	---	?	We advise that you check for faulty combustion, plugged air filters, or aftercoolers.

HISTORICAL DIAGNOSIS

OIL ANALYSIS REPORT

SOOT

Machine Id
FREIGHTLINER 88
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (13 LTR)

Aug 2023
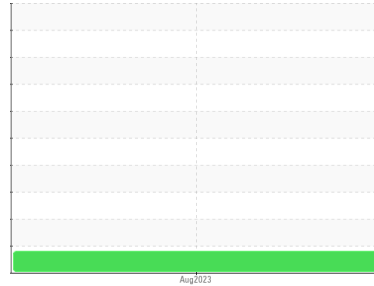
DIAGNOSIS

⚠ **Recommendation**

We advise that you check for faulty combustion, plugged air filters, or aftercoolers. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

⚠ **Contamination**

There is an abnormal amount of solids and carbon present in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0102640	---	---
Sample Date		Client Info		10 Aug 2023	---	---
Machine Age	mls	Client Info		442559	---	---
Oil Age	mls	Client Info		24861	---	---
Oil Changed		Client Info		Changed	---	---
Sample Status				ABNORMAL	---	---

CONTAMINATION		method	limit/base	current	history1	history2
Glycol		WC Method		NEG	---	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	28	---	---
Chromium	ppm	ASTM D5185m	>5	2	---	---
Nickel	ppm	ASTM D5185m	>2	0	---	---
Titanium	ppm	ASTM D5185m		0	---	---
Silver	ppm	ASTM D5185m	>3	0	---	---
Aluminum	ppm	ASTM D5185m	>30	<1	---	---
Lead	ppm	ASTM D5185m	>30	8	---	---
Copper	ppm	ASTM D5185m	>150	<1	---	---
Tin	ppm	ASTM D5185m	>5	<1	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
Cadmium	ppm	ASTM D5185m		0	---	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	2	---	---
Barium	ppm	ASTM D5185m	0	0	---	---
Molybdenum	ppm	ASTM D5185m	60	57	---	---
Manganese	ppm	ASTM D5185m	0	<1	---	---
Magnesium	ppm	ASTM D5185m	1010	897	---	---
Calcium	ppm	ASTM D5185m	1070	1087	---	---
Phosphorus	ppm	ASTM D5185m	1150	946	---	---
Zinc	ppm	ASTM D5185m	1270	1144	---	---
Sulfur	ppm	ASTM D5185m	2060	3302	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	4	---	---
Sodium	ppm	ASTM D5185m		2	---	---
Potassium	ppm	ASTM D5185m	>20	2	---	---
Fuel	%	ASTM D3524	>5	<1.0	---	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	⚠ 3.5	---	---
Nitration	Abs/cm	*ASTM D7624	>20	10.6	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	27.2	---	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.0	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	4.4	---	---

OIL ANALYSIS REPORT

360 OIL DIAGNOSTICS

Soot %

Base Number

Viscosity @ 100°C
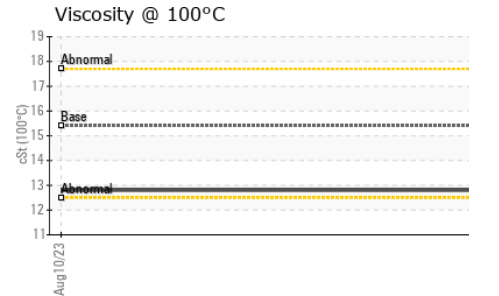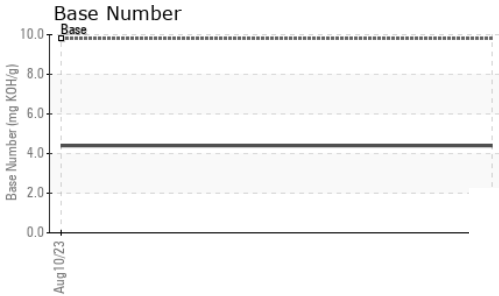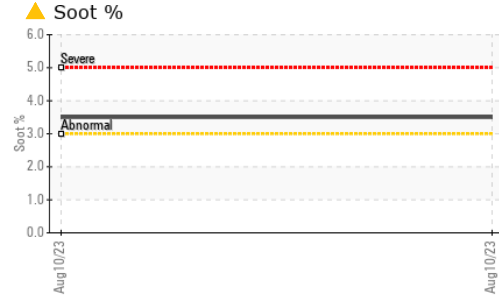
VISUAL

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	---	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	---	---
Precipitate	scalar	*Visual	NONE	**NONE**	---	---
Silt	scalar	*Visual	NONE	**NONE**	---	---
Debris	scalar	*Visual	NONE	**NONE**	---	---
Sand/Dirt	scalar	*Visual	NONE	**NONE**	---	---
Appearance	scalar	*Visual	NORML	**NORML**	---	---
Odor	scalar	*Visual	NORML	**NORML**	---	---
Emulsified Water	scalar	*Visual	>0.2	**NEG**	---	---
Free Water	scalar	*Visual		**NEG**	---	---

FLUID PROPERTIES

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	**12.8**	---	---

GRAPHS
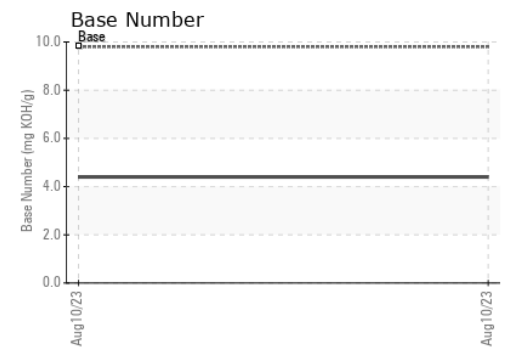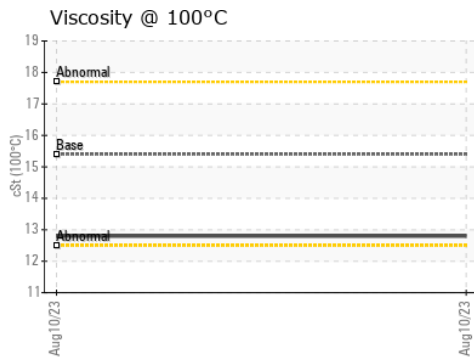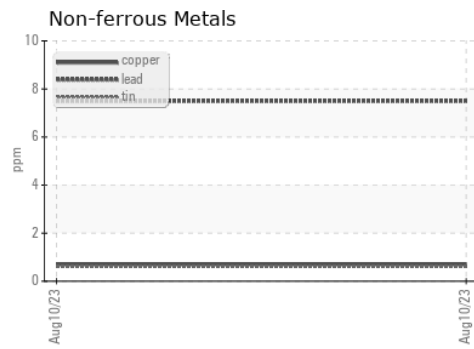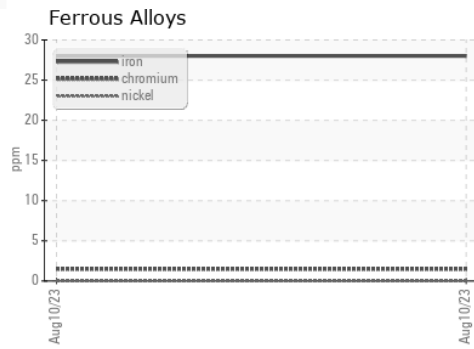
Ferrous Alloys

Non-ferrous Metals

Viscosity @ 100°C

Base Number

A Truck Repair
9349 China Grove Church Road
Pineville, NC
US 28134
Contact: Vlad Melnichuk
shop@migway.com
T: (980)255-3200
F:

To discuss this sample report, contact Customer Service at 1-800-237-1369.
* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.
Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

ANAB ACCREDITED TESTING LABORATORY
Certificate L2367